



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,320	01/10/2002	Lars Jansson	YAMAHA5.523APC	2320

20995 7590 02/07/2006

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT	PAPER NUMBER
----------	--------------

3618

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,320	JANSSON ET AL.	
	Examiner	Art Unit	
	Frank Vanaman	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-34, 36-42 and 55-59 is/are pending in the application.
- 4a) Of the above claim(s) 25-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23, 24, 30-34, 36-42, 55-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Status of application

1. Applicant's amendment, filed Nov. 22, 2005, has been entered in the application. Claims 23-34, 36-42, 55-59 are pending, claims 25-29 being withdrawn from consideration.

Claim Rejections - 35 USC § 102

2. The appropriate citation of 35 U.S.C. 102 relied upon herein may be found in the previous office action.

3. Claims 23, 24, 36, 39, 41, 55-57 and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohshita et al. (US 5,873,428). Ohshita et al. teach a vehicle having at least a front and rear wheel, with a frame supporting an engine (23), the front wheel (11) and rear wheel (17), the front wheel connected by a fork (19), the vehicle including a drive system wherein a hydraulic drive is provided for the front wheel-- including a pump (31), a motor (36), an accumulator (42), and connecting piping, the pump driven by the engine (24, 32, 33, 34, 35) the motor configured to drive the wheel (37, 38, 39, 41) with the accumulator providing a system pressure; the system having supply (43) and return (45) passages, with the accumulator and a filter (49) located in the return passage; the drive including a valve (47) which allows the wheel to be driven or to free-wheel (at which time it may run at any desired speed compared to the rear wheel since there is no drive connection to the front wheel in this condition), the wheel including a wheel shaft (63) mounted on the fork (19a, 19b) a cover (66) fixed with respect to the fork and providing an aperture in which the motor is mounted (e.g., at 68) wherein a portion of the motor output shaft (37) which extends back into the motor, extends through the aperture; the wheel having an internal gear (39) the motor output shaft having a mating gear (38) which engages the internal gear; the internal hub portion of the wheel, which may rotate about an axis (proximate 59) having a generally cylindrical shape with a closed end (to the left in figure 6) and an opposite end which is closed by the cover (66) and is near the closed end, to the breadth claimed, The open edge (e.g., proximate numeral 67, figure 6) defining a plane, the cover having at least a flange portion (note section, figure 6) extending inwardly of the outer periphery of the wheel

Art Unit: 3618

hub, and an outer edge (note chamfer below the engagement with sealing arrangement 67) which protrudes outwardly (i.e., to the right in figure 6) from the plane defined by the open end of the hub, including a sealing arrangement (67) which is also positioned so as to not extend beyond the outer periphery of the hub (and thus disposed inwardly from the open end to the breadth claimed), radially between the outer radial periphery of the cover and the inner radial boundary of the hub, the wheel being supported on the shaft by two bearing assemblies (not referenced, note figure 6).

Claim Rejections - 35 USC § 103

4. The appropriate citation of 35 U.S.C. 103 relied upon herein may be found in the previous office action.

5. Claims 33, 34, 37, 38, 40 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita et al. (Cited above). The reference to Ohshita et al. is discussed in detail above. As regards claims 33 and 34, the reference fails to specifically teach the use of either a bladder accumulator or a piston accumulator. Inasmuch as both types of accumulator are well known and interchangeable, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the accumulator taught by Ohshita et al. as either a piston accumulator or a bladder accumulator for the purpose of using a commonly available type of accumulator, for example the bladder accumulator in order to reduce weight overall, or the piston accumulator in order to avoid the additionally required poppet valve needed for the proper operation of a bladder accumulator.

As regards claim 37, the reference to Ohshita et al. fails to specifically teach a labyrinth seal on the peripheral surface of the cover, however in that a labyrinth seal is well known for assisting in the minimization of flow without providing further frictional rubbing between relatively moving parts, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a labyrinth seal on the cover in addition to the taught seal in order to provide a small further reduction in the material which may leak into the inner portion of the hub.

Art Unit: 3618

As regards claim 38, the reference to Ohshita et al. fails to specifically teach that a portion of the shaft extends through the aperture from the motor to the gear. In that it is well known to make elements with moving parts accessible for repair, it would have been obvious to one of ordinary skill in the art at the time of the invention to mount the entire motor portion (36) externally of the cover (66) so as to facilitate easy repair of the motor without the need to disassemble the rest of the wheel mechanism. As regards claim 40, the reference to Ohshita et al. fails to specifically teach both a needle bearing and a ball bearing. In that both needle and ball bearing are equally well known, and wherein a radial distance taken up by a needle bearing is reduced from that of a ball bearing, it is not considered to be beyond the skill of the ordinary practitioner to replace one of the ball bearings (e.g., the set closer to plate 66) with a needle bearing, for the purpose of increasing the free space inside the wheel hub area near the mounting of the closure plate, facilitating easier maintenance.

As regards claim 58, the reference to Ohshita et al. fails to teach the disk of the cover as being disposed in the recess of the hub. It is well known in the manufacturing arts to recess an element in order to provide a more compact arrangement, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to recess the disk portion of the cover (66) within the periphery of the hub (e.g., such that the outer face of cover 66 is laterally inward of the outer end of the hub, proximate 67) for the purpose of providing a more compact wheel profile, reducing the volume the central portion occupies.

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita et al. in view of Taig (US 5,328,002). The reference to Ohshita et al. is discussed above and fails to teach that the system includes a housing, wherein the filter and accumulator are contained in the housing. Taig teaches a hydraulic supply system for a vehicle system wherein an accumulator (30) is provided in the same housing as a filter (190). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the filter and accumulator taught by Ohshita et al. in the same housing as taught by Taig, for the purpose of incorporating both elements (with particular noting that

Art Unit: 3618

Ohshita's filter and accumulator are located one after the other in circuit) in a single enclosure, thus reducing the number of mounting elements needed to attach the system to the vehicle.

7. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita et al. in view of Taig and Bedenbender et al. (US 3,929,206). The references to Ohshita et al. and Taig are discussed above and fail to teach the arrangement of the accumulator and filter such that longitudinal axes of each are substantially parallel. Bedenbender teaches an arrangement wherein a filter (256) and a set of accumulators (264, 266, 268) are arranged side-by side (figure 8a, figure 9) having their respective longitudinal axes parallel to one another. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the arrangement of accumulator and filter of the vehicle of Ohshita et al. as modified by Taig, such that longitudinal axes of both elements are parallel, for the purpose of reducing space in the mounted assembly.

As regards claim 32, the examiner takes official notice that the use of an exhaust pipe and muffler for an internal combustion engine on a land vehicle is very well known, and considered to be an inherent portion of the vehicle if taught to include an internal combustion engine. As regards the locating of the housing with the accumulator and filter proximate the muffler, it would have been obvious to one of ordinary skill in the art at the time of the invention to locate the accumulator and filter housing proximate a muffler (for example under a seat portion of the vehicle), for the purpose of allowing the housing to be placed in an otherwise unused space in the vehicle.

8. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita et al. in view of Heible (US 5,894,903). The reference to Ohshita et al. is discussed above and fails to teach the system as configured to drive the front wheel at a speed less than that of the rear wheel. Heible teaches a hydraulic drive for a motorcycle wherein the front wheel is driven when the rear wheel runs in a range of 1% to 3% faster than the front wheel (col. 3, lines 32-42). It would have been obvious to one of

Art Unit: 3618

ordinary skill in the art at the time of the invention to provide the drive system of the vehicle of Ohshita with the control for driving the front wheel when the rear wheel speed is greater, for the purpose of controlling the engagement of drive to the front wheel.

Response to Comments

9. Applicant's comments, filed with the amendment, have been considered, but are not persuasive. As regards the assertion that the Ohshita reference fails to teach the cover being disposed such that an outermost edge is axially spaced from the plane defined by the hub edge, please note that figure 6 in the Ohshita reference clearly shows a chamfer, having an inner and outer edge, the outer edge of which is disposed outside, but parallel to, a plane defined by a circumference of the hub assembly. Applicant has individually addressed other rejections made under 35 USC §103, however the only argument advanced with respect to these claims is essentially a reiteration of that directed directly to Ohshita et al. For the reasons set forth directly above, these arguments are not persuasive.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 3618

11. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

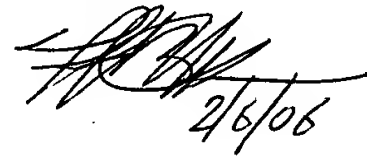
A response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to:

PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618



2/6/06